

REMARKS

Reconsideration and allowance of the present patent application based on the foregoing amendments and following remarks are respectfully requested.

By this Amendment, claim 1 is amended and claims 21-24 are newly added. Support for the amendment to claim 1 and new claims 21-24 may be found throughout the original disclosure. No new matter has been added. Claims 15-17 are withdrawn from further consideration as being directed to a non-elected invention. After entry of this Amendment, claims 1-24 will remain pending in the patent application.

In the Office Action, the oath/declaration was objected to as failing to identify the mailing address of the inventor. In response, a Supplemental Oath/Declaration indicating the mailing address and the zip code designation has been prepared and is enclosed herewith. Accordingly, reconsideration and withdrawal of the objection to the oath/declaration are respectfully requested.

Claim 1 was rejected under 35 U.S.C. §102(b) based on Wadensten (U.S. Pat. No. 4,425,813). The rejection is respectfully traversed.

Claim 1 recites a support system for a rotating shaft, comprising, *inter alia*, a bracket assembly having a first damping member having a first fixed end and a second movable end, said first fixed end being securably attached to said fixed bracket and said second movable end being movable in a first plane aligned with the shaft, said bracket assembly having a brace securably attached to said second movable end of said first damping member, said first fixed end and said second movable end of said first damping member being independently attached to, respectively, the fixed bracket and the brace. Wadensten does not disclose, teach or suggest these features.

Wadensten discloses a vibration damping apparatus that includes a pneumatic motor 210 (identified by the Office Action as the “fixed bracket” of claim 1), a motor mount disk 202, a first rubber grommet 230 (identified by the Office Action as the “first damping member” of claim 1) attached to the motor mount disk 230, an isolator disk 200 (identified by the Office Action as the “brace” of claim 1), a second rubber grommet 230 (identified by the Office Action as the “second damping member” of claim 1) attached to the isolator disk, and a housing 164 that carries an anti-friction bearing 182 (identified by the Office Action as the “roller bearing” of claim 1).

However, unlike claim 1, Wadensten does not disclose, teach or suggest that a first fixed end and a second movable end of the first damping member are independently attached to, respectively, the fixed bracket and the brace. Wadensten merely discloses that the first rubber grommet 230 is attached to the motor mount disk 202 and the isolator disk 200 with a common screw. (See FIG. 1 of Wadensten). Therefore, in Wadensten, both ends of the rubber grommet 230 are not independently attached to the motor mount disk 202 and the isolator disk 200. As such, Wadensten does not disclose, teach or suggest each and every element recited by claim 1 and, as a result, cannot anticipate claim 1.

Accordingly, reconsideration and withdrawal of the rejection of claim 1 under 35 U.S.C. §102(b) based on Wadensten are respectfully requested.

Claims 7-12, 14, 18 and 20 were rejected under 35 U.S.C. §103(a) based on Brunken Jr. (U.S. Pat. No. 6,057,618) (hereinafter "Brunken"). The rejection is respectfully traversed.

Claim 7 recites a bracket assembly for supporting a rotating shaft, wherein, *inter alia*, the first plate member, the second plate member, and the brace together form a one-piece, unitary bracket element. As conceded by the Examiner at page 5 of the Office Action, Brunken does not disclose, teach or suggest these features. However, Applicant respectfully submits that there are additional features that are absent in Brunken.

For example, Brunken does not disclose, teach or suggest a first damping member including a first plate member and a first damping element positioned within said first plate member and a second damping member including a second plate member and a second damping element positioned within said second plate member.

Brunken merely discloses a damping member 60 that includes a laminated structure formed by three elastomeric pads 80a-80c that are each sandwiched between two plates. Specifically, Brunken discloses that "the pad 80a is sandwiched between two relatively thin, plates 82a and 82b, the pad 80b is sandwiched between the plate 82b and an additional plate 82c, and the pad 80c is sandwiched the plate 82c and an additional plate 82d." (See col. 3, lines 16-25 of Brunken). Therefore, unlike claim 7, the damping pads of Brunken are merely arranged between two plate members, not within a plate member. Because Brunken provides no motivation or suggestion to arrange a damping material within the plate 82a-d, Applicant respectfully submits that claim 7 cannot be rendered obvious in view of Brunken.

The Examiner indicated that it would have been obvious to form the first plate member, the second plate member, and the brace together as a one-piece, unitary bracket element. Applicant respectfully disagrees.

As mentioned previously, claim 7 mandates that a first and a second damping element be positioned, respectively, within the first and the second plate members. Claim 7 also mandates that the first and the second plate members form a one-piece single unitary bracket element with the brace.

By contrast, Brunken discloses a bracket 50 connected to a damping member that includes a laminated structure having a plurality of damping pads 80a-c, thin plate members 82a-d and blocks 84a-f that are bonded all together to form a unitary member. (See Brunken at col. 3, lines 26-30). Therefore, in order to obtain the structure of claim 7, one would need to significantly alter the damping assembly of Brunken, which alterations are clearly not obvious in view of Brunken. For example, in order to obtain the structure of claim 7, one would need to replace the three thin plate members of the laminated structure with one plate and arrange the elastomeric pad within such a plate. Furthermore, one would also need to remove the six blocks 84a-j, which are made of a strong rigid material to permit a rigid mounting of the damping member to the bracket 50. In the absence of impermissible hindsight based on Applicant's own specification, there is clearly no reason as to why one of ordinary skill in the art would reconstruct such a damping member and make it integral. For at least this reason, Applicant respectfully disagrees with the Examiner's determination that it would have been obvious to obtain the features of claim 7 based on Brunken.

Applicant also respectfully submits that by forming the first plate member, the second plate member, and the brace together as a one-piece, unitary bracket element, it is possible to better control the dimensions of the final bracket element, and therefore to provide a bracket element having much better performances compared to an assembly that includes multiple parts that are bolted together. For example, with a one-piece assembly, it is possible to provide precise space cutouts within the plate member where the damping element is disposed. Brunken fails to disclose, teach or suggest the criticality of such an arrangement. As such, Applicant respectfully submits that it would not have been obvious to provide the claimed bracket assembly based on Brunken.

Claims 8-11 are patentable over Brunken at least by virtue of their dependency from claim 7 and for the additional features recited therein.

Claim 12 is patentable over Brunken for at least similar reasons as provided in claim 7 and for the additional features recited therein. Namely, claim 12 is patentable over Brunken at least because this claim recites a support for a rotating shaft wherein, *inter alia*, the first damping member includes a first plate member and a first damping element positioned within

the first plate member and the second damping member includes a second plate member and a second damping element positioned within the second plate member, the first plate member, the second plate member, and the brace together forming a one-piece, unitary bracket element. As mentioned previously, Brunken provides no motivation or suggestion to arrange a damping material within the plate 82a-d. As such, Applicant respectfully submits that claim 12 cannot be rendered obvious in view of Brunken. Furthermore, for at least similar reasons provided above, Applicant respectfully submits that there is no motivation or suggestion to provide a one-piece bracket element in Brunken.

Claim 14 is patentable over Brunken at least by virtue of its dependency from claim 12 and for the additional features recited therein.

Claim 18 is patentable over Brunken for at least similar reasons as provided in claim 7 and for the additional features recited therein. Namely, claim 18 is patentable over Brunken at least because this claim recites a support for a rotating shaft, wherein, *inter alia*, the first damping member including a first plate member and a first damping element positioned within the first plate member and the second damping member including a second plate member and a second damping element positioned within the second plate member, each of the first plate member and the second plate member being formed as a one-piece, unitary plate member. Applicant respectfully submits that these features are not rendered obvious by Brunken.

Claim 20 is patentable over Brunken at least by virtue of its dependency from claim 18 and for the additional features recited therein.

Accordingly, reconsideration and withdrawal of the rejection of claims 7-12, 14, 18 and 20 under 35 U.S.C. §103(a) based on Brunken are respectfully requested.

Claims 1-6, 13 and 19 were rejected under 35 U.S.C. §103(a) based on Brunken in view of Takehara *et al.* (U.S. Pat. No. 5,821,647) (hereinafter "Takehara"). The rejection is respectfully traversed.

Claim 1 recites a support system for a rotating shaft including, *inter alia*, a roller bearing securably attached to the second end of the second damping member, the roller bearing being constructed and arranged to provide a mechanical interconnection between the second end of said damping member and the shaft. As conceded by the Examiner, Brunken does not disclose, teach or suggest a roller bearing. However, the Examiner relied on Takehara as allegedly teaching such a bearing and argued that it would have been obvious to replace the magnetic assembly of Brunken with a roller bearing to support the shaft.

Applicant respectfully disagrees at least because (a) Takehara is silent as to a roller bearing and (b) Brunken teaches away from such a bearing.

Takehara discloses an assembly that includes a shaft 1 supported by a pair of bearings 2 and 3. (*See* FIG. 1 of Takehara). Takehara does not disclose, teach or suggest that bearings 2 and 3 are roller bearings. Therefore, Takahara does not remedy the deficiencies of Brunken. As such, any reasonable combination of Brunken and Takehara cannot result, in any way, in the invention of claim 1.

In addition, Applicant respectfully submits that there is no motivation to modify Brunken in order to replace the magnetic bearing with a roller bearing.

Brunken discloses that the object of the invention is to provide a contactless assembly for supporting the shaft. Brunken discloses for example that there is a need for “a relative inexpensive and lightweight support assembly for supporting a rotating shaft according to which the shaft does not contact the support structure or dampers and therefore does not require grease lubricated bearings, hangers and the like, while eliminating squeeze film dampers and friction dampers.” (*See* col. 1, lines 34-37 of Brunken, emphasis added). Brunken discloses that by using a magnetic assembly, “the support assembly 14 provides a non-contacting, support of the shaft in an elevated position relative to the support plate 12 (FIG. 1), while the magnetic rings 92 and 94 create a spring-like resistance to radial motion of the shaft.” (*See* col. 4, lines 7-11 of Brunken, emphasis added – *See* also col. 5, lines 7-17 of Brunken). Therefore, by virtue of teaching that a contactless magnetic bearing provides significant advantages over a bearing that contacts the shaft, Brunken teaches away from a bearing that provides a mechanical interconnection between the second end of the damping member and the shaft. As such, one of ordinary skill in the art would clearly not be motivated to replace the contactless magnetic bearing of Brunken with a roller bearing that contacts the shaft. Clearly, the proposed modification would defeat the intended purpose of Brunken. For at least these reasons, Applicant respectfully submits that the proposed modification of Brunken is improper. (*See* MPEP 2145).

Claims 2-6 depend from claim 1 and are patentable over Brunken, Takehara and a combination thereof for at least similar reasons as provided in claim 1 and for the additional features recited therein.

Similarly, claims 13 and 19 are patentable over Brunken, Takehara and a combination thereof for at least similar reasons as provided in claim 1 and for the additional features recited therein. Moreover, Applicant also respectfully submits that Takehara fails to remedy

the deficiencies of Brunken in that Takehara fails to disclose, teach or suggest a first damping member that includes a first plate member and a first damping element positioned within the first plate member and a second damping member that includes a second plate member and a second damping element positioned within the second plate member, the first plate member, the second plate member, and the brace together forming a one-piece, unitary bracket element, as recited in claims 13 and 19.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-6, 13 and 19 under 35 U.S.C. §103(a) based on Brunken in view of Takehara are respectfully requested.

Claims 21-24 are newly added and define additional subject matter that is novel and non-obvious. Claims 21-24 are patentable at least by virtue of their dependency from claim 1 and for the additional features recited therein.

Applicant has addressed all the Examiner's rejections and objections and respectfully submits that the application is in condition for allowance. A notice to that effect is earnestly solicited.

If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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Encl: Supplemental Oath/Declaration